

CLAIMS:

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5 1. A system for management and control of multimedia communications resources comprising:

(a) communications pathway;

(b) an originating multimedia computing device coupled to said communications pathway with desired quality of service requirements;

(c) one or more destination multimedia computing devices coupled to said communications pathway;

10 (d) one or more quality of service management components coupled to said communications pathway;

wherein said quality of service management components determines communications pathway resource availability for multimedia communications with said desired quality of service requirements in response

15 to a request from said originating multimedia computing device to establish communications with said destination multimedia computing devices.

2. The system of claim 1 wherein said quality of service management components includes at least one resource status database.

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3. The system of claim 1 wherein said quality of service management components includes a plurality of resource status databases coupled to said communications pathway.

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4. The system of claim 3 wherein said quality of service management components further includes at least one communications server coupled to said communications pathway; and at least one quality of service management server coupled to said communications pathway.

5. The system of claim 4 wherein said originating multimedia communications device and each said destination computing devices include executable software QOS caller modules.

5 6. The system of claim 4 wherein said communications server include executable software QOS comm modules.

7. The system of claim 1 wherein said desired quality of service includes bandwidth requirements.

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8. A method of management and control of resources for multimedia communications comprising the steps of:

(a) generating a request from an originating multimedia computing device to a quality of service management component for establishment of

15 multimedia communications with one or more destination multimedia communications devices over a communications pathway with a desired quality of service;

(b) issuing a query of available service quality of resources from said quality of service management component to one or more resource status databases;

20 (c) issuing replies from said resource status databases to said quality of service management component on said available service quality of resources;

(d) processing said replies by said quality of service management component to determine availability of said desired quality of service with said features;

25 (e) sending a positive or negative response to said originating multimedia desktop device from said quality of service management component corresponding to said request on said establishment of

30 multimedia communications.

9. The method of claim 8 including the further step of establishing a connection with said originating multimedia communications device to said destination multimedia computing device to establish said communications at said desired quality of service upon receipt of said positive response.

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10. The method of claim 8 including the further step of taking alternative action by said originating multimedia communications device upon receipt of said negative response.

10 11. The method of claim 10 wherein said alternative action includes employing a call back feature.

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12. A method of management and control of resources for multimedia communications comprising the steps of:

15 (a) generating a first request from an originating multimedia computing device to a communications server for establishment of multimedia communications with one or more destination multimedia communications devices over a communications pathway with a desired quality of service;

20 (b) determining features of said multimedia communications for said desired quality of service by said communications server;

(c) issuing a second request from said communications server to a quality of service management server for said desired quality of service with said features;

25 (d) issuing a query of available service quality of resources from said quality of service management server to one or more resource status databases;

(e) issuing replies from said resource status databases to said quality of service manager on said available service quality of resources;

30 (f) processing said replies by said quality of service manager to determine availability of said desired quality of service with said features;

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(g) generating a first response from said quality of service manager to said communications server in response to said second request;

(h) sending a second response to said originating multimedia desktop device from said communications server in response to said first request on said establishment of multimedia communications.

13. The method of claim 12 including the further steps of:

(i) generating a third request from said originating multimedia desktop device to said communications server to commence communications with said destination multimedia devices;

(j) generating an allocation request from said communications server to said quality of service manager to allocate said resources;

(k) generating an update request from said quality of service manager to said resource status databases to record the allocation of said resources;

(l) issuing a connection command from said communication server to said destination multimedia computing device to establish said communications.

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14 The method of claim 12 including the further steps of:

(i) generating a third request from said originating multimedia desktop device to said communication server to notify when said desired quality of service becomes available;

(j) generating a fourth request from said communication server to said quality of service manager to monitor said resource status databases;

(k) monitoring said resource status databases until said resources become available;

(l) generating a third response from said quality of service manager to said communication server when said resources become available;

B) (m) generating a fourth response from said communications server to said originating multimedia device of availability of said desired quality of service.

A) 5 15. The method of claims 12, ~~13 or 14~~ wherein said desired quality of service is bandwidth.